

DETAILED ACTION

Notice to Applicant

1. The following is an Examiner's Amendment and Reason's for Allowance following Applicant's Response and Amendment of 10/23/09 and communications with Applicant Representative Atty. Mark Whittenberger, Reg. No. 52,356, dated 3/24/10 and 3/25/10 (*see* attached Interview Summary).
2. Applicant's submission filed on 10/23/09 has been entered, in which Applicant amended claims 1, 3, 11, 13, 20, and 24.
3. Of claims 1-17, 20, 23-30 pending as of 10/23/09, (1) claims 3, 11-17, and 24 are cancelled as detailed below; and (2) claims 1-2, 4-10, 20, 23, 25-30 are allowed as amended below.

Allowable Subject Matter

4. Claims 1–2, 4–10, 20, 23, 25–30 as amended below are allowed over the prior art as explained further below in the reasons for allowance.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a communications with Mark Whittenberger, Reg. No. 52,356, dated 3/24/10 and 3/25/10.

The application has been amended as follows:

In the Title

Please amend the title of the application as follows:

(Currently Amended) SYSTEM AND METHOD FOR GENERATING ROLE
TEMPLATES BASED ON SKILLS LISTS USING KEYWORD EXTRACTION
DYNAMIC ROLE GENERATOR

In the Claims

Please amend claims 1 and 20 and cancel claims 3, 11–17, and 24 of the application as follows:

1. (Currently Amended) A computer-implemented method for generating one or more role templates required for a project from one or more unstructured text documents associated with the project, the method comprising:
extracting, via a search engine executed by a role generator system, key words from unstructured text in the one or more documents associated with the project, wherein the one or more documents are stored on a storage medium accessible across a network;
mapping, by the role generator system, the key words extracted from the unstructured text in the one or more documents to predefined job skill definitions in a skills taxonomy;
generating, by the role generator system, a plurality~~list~~ of skills based, at least in part, on the predefined job skill definitions mapped to the key words extracted from the unstructured text;

ranking each of the plurality of skills based on relevance to the project;
filtering any skills from the plurality of skills that rank below a predetermined threshold
to produce a generated list of skills;
comparing, by the role generator system, the generated list of skills to one or more
predefined role templates, each of the one or more predefined role templates
including a predefined list of skills required to perform a predefined role;[[;]]
when the generated list of skills at least partially matches the predefined list of skills
included in a particular one of the one or more predefined role templates,
generating, by the role generator system, a new role template for the project
based, at least in part, on the particular predefined role template, wherein the new
role template defines a role required for the project and includes at least a portion
of the job skill definitions included in the particular predefined role template; and
when the generated list of skills does not match the predefined list of skills included in a
particular one of the predefined role templates, generating, by the role generator
system, a new role template for the project based on the generated list of skills.

3. (Cancelled)

11-17. (Cancelled)

20. (Currently Amended) A system for generating one or more roles required for a project
comprising:

a skills taxonomy containing one or more predefined job skill definitions and one or more key words relating to the one or more predefined job skill definitions;

a ~~[[n]] archive of storage device for storing~~ one or more predefined role templates, wherein the one or more predefined role templates define one or more roles required for the project;

a search engine, ~~comprising a server executed by a processor of the system~~, for extracting unstructured text from one or more documents associated with the project and extracting key words from the unstructured text associated with the project; and

a role generator, ~~executed by the processor of the system~~, for generating one or more role templates for the project based on the key words extracted from the unstructured text in the one or more documents,

wherein the role generator is configured to:

map the extracted key words extracted from the unstructured text in the one or more documents to the one or more predefined job skill definitions in the skills taxonomy;

generate a ~~plurality~~ list of skills for a project based, at least in part, on the predefined job skill definitions mapped to the key words extracted from the unstructured text;

rank each of the plurality of skills based on relevance to the project;

filter any skills from the plurality of skills that rank below a predetermined threshold to produce a generated list of skills;

compare at least a portion of the generated list of skills to one or more of the predefined role templates, each of the one or more predefined role templates including a predefined list of skills required to perform a predefined role;

generate a new role template when the generated list of skills at least partially matches the predefined list of skills included in a particular one of the predefined role templates, the new role template based, at least in part, on the particular predefined role template, wherein the new role template defines a role required for the project and includes at least a portion of the job skill definitions included in the particular predefined role template;
and

when the generated list of skills does not match the predefined list of skills included in a particular one of the predefined role templates, ~~generating~~, by the role generator system, a new role template for the project based on the generated list of skills.

Reasons for Allowance

6. The following is an examiner's statement of reasons for allowance:

In the art of enterprise resource allocation using keyword extraction, the present invention is a system and computer-implemented method for generating one or more role templates required for a project from one or more associated unstructured text documents, comprising: extracting, via a search engine key words from the unstructured text documents stored on a network accessible storage medium; mapping the extracted key words to predefined job skill definitions in a skills taxonomy; generating, a plurality of skills based on the predefined job skill definitions mapped to the extracted key words, ranking each of the plurality of skills based on relevance to the project; filtering any skills from the plurality of skills that rank below a predetermined threshold to produce a generated list of skills; comparing, the generated list of skills to one or more predefined role templates, each including a predefined list of skills required to perform a predefined role; and when the generated list of skills at least partially matches the predefined list of skills, generating, a new role template for the project based on the particular predefined role template, wherein the new role template defines a role required for the project and includes at least a portion of the job skill definitions included in the particular predefined role template; otherwise generating a new role template for the project based on the generated list of skills.

The closest prior art is **Embley et al.**, *Ontology-Based Extraction and Structuring of Information from Data-Rich Unstructured Documents*, In *Proceedings of the Conference on Information and Knowledge Management (CIKM'98)*, Washington D.C., 1998, pg 1–8 [hereinafter **Embley**]. Embley teaches a computer-implemented method for defining one or more roles for a project, the method comprising: extracting, via a search engine, one or more key words from unstructured text associated with the project; comparing *potential* key words against predefined job skill definitions in a skills taxonomy and generating a skills list based on the comparison; comparing its skills list (denoted by keywords) to one or more predefined role templates wherein the predefined role template includes a larger list of skills which may be required to perform a predefined role; the extraction of keywords which describe skills and consideration of the extracted skills in determining skills list expansion; the functionality and structure necessary for storing on a storage medium and adding data to a database; execution of the method by a role generator system via the use of processors and the use of the internet, aka a communications network; display in a user interface on a computing device; and wherein a programmable machine is used.

Neece et al., U.S. Pub. 2003/0037032 [hereinafter **Neece**] teaches comparing a skills list with one or more predefined role templates wherein the predefined role template includes skills required to perform a predefined role and generating, via a role generator, of a new role template based on the comparison of its skills list and the predefined role template, wherein the new role template defines a role required for the project and includes job skill definitions

required for the project; ranking of each of the plurality of skills as required or preferred; wherein a storage medium is network accessible, and the user interface is graphical and displayable

Haq et al., U.S. Pat. 6,275,812 [hereinafter Haq] teaches, in the art of resource management, information that users may wish to use in connection with task managing software being a skills list; taxonomy being a skills taxonomy; comparing at least a portion of the skills list to one or more predefined roles; text being associated with a project; a template being a role template for the project, the names and events being predefined roles wherein each role template includes one or more skills associated with a role; and the general concept of ranking each of the plurality of skills based on a relevance to the project and filtering skills that do not meet a predefined threshold.

Bennett et al., U.S. Pub. 2002/0194379 [hereinafter Bennett] teaches a computer implemented method for defining template information, the method comprising: extracting one or more key words from unstructured text; comparing the one or more key words with a taxonomy; generating information that users may wish to use in connection with task managing software based on a comparison between the contact information taxonomy and key words from unstructured text; and generating one or more templates based on the comparison of the at least a portion of the information that users may wish to use in connection with task managing software and one or more predefined names or events.

McCormack et al., U.S. Pub. 2004/0203679 [hereinafter McCormack] teaches use of a keyword analysis system to extract keywords from an incoming email request and use those to determine which skill is most appropriate.

Doerre et al., U.S. Pat. 6,446,061 [hereinafter Doerre] teaches a data text mining extraction tool including separation of data into taxonomies.

However, neither Embley, Neece, Haq, Bennett, McCormack, nor Doerre, singularly or in combination, teach or fairly suggest, with respect to Applicant's claimed method and (system) the combination of (1) *generating (generate), by the role generator system, a plurality of skills based, at least in part, on the predefined job skill definitions mapped to the key words extracted from the unstructured text;* (2) *ranking (rank) each of the plurality of skills based on relevance to the project [and] filtering (filter) any skills from the plurality of skills that rank below a predetermined threshold to produce a generated list of skills;* and (3) *comparing (compare), by the role generator system, the generated list of skills to one or more predefined role templates, each of the one or more predefined role templates including a predefined list of skills required to perform a predefined role*

Nor does the remaining prior art of record remedy the deficiencies found in Embley, Neece, Haq, Bennett, McCormack, and Doerre. Furthermore, neither the prior art, the nature of the problem, nor knowledge of a person having ordinary skill in the art provides for any predictable or reasonable rationale to combine prior art teachings.

Art Unit: 3623

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN M. PATS whose telephone number is (571)270-1363. The examiner can normally be reached on Monday through Friday, 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on 571-272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justin M Pats/
Examiner, Art Unit 3623

/Beth V. Boswell/
Supervisory Patent Examiner, Art Unit 3623